Evaluating the Experience of Organizations Implementing Medication Management Services Using a Variety of Implementation Strategies

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Abstract

***Purpose**: The purpose of this project was to evaluate the experience of organizations who participated in a medication management learning collaborative and their perceptions of the different implementation strategies that were employed.*

***Methods**: Using a utilization-focused evaluation approach, qualitative interviews were conducted with former participants (clinicians, managers, or other key stakeholders) of medication management learning collaboratives organized and delivered by Alliance for Integrated Medication Management (AIMM). The purpose of the learning collaboratives was to provide structure and facilitation to accelerate the implementation of medication management services. One-on-one semi-structured interviews were carried out with a lead member of 11 different organizations that participated in an AIMM collaborative about their experience in the collaborative and the different implementation strategies that were used.*

***Results**: Three themes emerged: (1) perspectives on the implementation strategies, (2) external facilitators, and (3) additional benefits of being in the collaborative. Certain implementation strategies used by AIMM, such as coaching, were considered beneficial by almost everyone while other strategies, such as webinars, had mixed opinions. Participants also highlighted the importance of external facilitators, like dedicated time to work on implementation strategies, as well as the additional benefits like the professional development that comes from being in a learning collaborative and learning different implementation strategies.*

***Conclusion**: Implementation strategies may help accelerate the adoption and expansion of medication management services within and across organizations. The results of this evaluation shed light on the experiences of different organizations using select implementation strategies in their medication management implementation efforts. The perspectives of participants in this study may help other organizations in selecting and developing similar implementation strategies.*

Keywords: implementation science, medication therapy management, quality improvement

Introduction

It is estimated that about 16% of total U.S. health care expenditures are spent on costs related to drug-related morbidity and mortality resulting from nonoptimized medication therapy.[1] To address this costly and prevalent public health problem, there is an urgent need to enhance and expand medication management services provided by pharmacists. Medication management services are a "spectrum of patient-centered, pharmacist-provided, collaborative services that focus on medication appropriateness, effectiveness, safety, and adherence with the goal of improving health outcomes."[2] Despite the growing need for medication management, the uptake and spread of pharmacists as patient care providers working as part of a collaborative health care team has been slow. It has been suggested that it takes 17 years for new interventions and services to be fully implemented into practice.[3] Furthermore, numerous barriers have been cited to implementing medication management services, such as compensation, staffing, as well as physician and patient engagement.[4–6]

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Implementation strategies constitute the "how to" of changing health care[7] and research has demonstrated that success of medication management is improved when implementation strategies are employed.[8] However, given the array of implementation strategies that could be of benefit, it is important to understand pharmacists' and organizations' experience utilizing different implementation strategies to determine what they found to be beneficial and how it helped them in their transformation work. Alliance for Integrated Medication Management (AIMM) is an organization that utilizes a variety of implementation strategies to foster the implementation or expansion of medication management services within health care systems. The purpose of this project, therefore, was to evaluate the experience of organizations who participated in AIMM and their perceptions of the different implementation strategies that were employed.

Background

Alliance for Integrated Medication Management (AIMM)

Established in 2011, the Alliance for Integrated Medication Management (AIMM) is a non-profit organization working to help organizations adopt team-based medication management services. Over the years, AIMM has partnered with a variety of stakeholders, including Apexus, Inc., American Society of Health System Pharmacists (ASHP), Cardinal Health Foundation, the Empire Health Foundation, Concordia University of Wisconsin, and others to develop, design and facilitate learning and action

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collaboratives that support implementation of medication management services. Learning collaboratives have ranged from 12 to 36 months and have engaged health systems, community pharmacies, primary care clinics, and other organizational types regionally or nationally. However, usually, at least half of participating organizations are a teaching hospital or health system.

Most frequently, costs associated with facilitating the learning and action collaborative are fully or partially covered by a sponsoring organization or "convener" that has a vested interest facilitating advancements in medication management. Costs not underwritten by a sponsoring organization are paid by participating entities via enrollment fees. AIMM works with the convening entity to understand its goals, its audience, and the resources available to design the collaborative experience in a way that best meets the needs of all parties involved.

Typically participating entities join a learning and action collaborative via one of two mechanisms: (1) self-selection/enrollment, or (2) via engagement with a formal sponsored program (such as a grant program in which receipt of funding creates an expectation to participate in the sponsor's collaborative).

AIMM organizes the experience an organization goes through around three main areas: (1) organizational experience and education, (2) transformational leadership, and (3) collaboration and interaction. This is achieved by exposing frontline staff to evidence-based frameworks to improve care and participate in learning events, teaching organizations how to develop their "leadership voice" and performance stories, and providing the opportunity to network with national experts and peers.

While each learning collaborative is tailored to meet the specific opportunity presented by the convening organization, several implementation strategies are consistently used, including:

- Use and application of the quality improvement materials outlined in the Institute for Healthcare Improvement's (IHI) Breakthrough Model of Performance Improvement,[9] including use of aim statements, driver diagrams, and plan-do-study-act cycles.
- Facilitating collaborative learning and an "all teach, all learn" environment where all participants are contributing to the learning of the community.
- Regularly occurring in-person live or virtual events (pacing events) followed by action periods.
- Individualized coaching offered by experienced implementation coaches.

AIMM has collaborated with organizations in which focused initiatives have included but are not limited to diabetes management and reducing hospital readmissions and emergency department visits, decreasing opioid use, optimizing medication safety for children with medical complexity at hospital discharge, and many others.

Methods

This was a utilization-focused evaluation relying on qualitative methods. Utilization-focused evaluation is based on the principle that evaluations should focus on the intended use by intended users and therefore primary intended users are engaged in most steps of the evaluation process.[10] In this case, AIMM was the primary intended user and consequently AIMM staff were engaged in the formulation of the research question, development of the interview guide, and discussion in how the results could be used to improve implementation of medication management services. The University of Minnesota Institutional Review Board (IRB) determined that this study did not need to undergo formal review.

Participants

To select organizations for the evaluation, there were three inclusion criteria: (1) organizations had to have completed at least one AIMM-facilitated collaborative, (2) the collaborative needed to be completed no earlier than 2018, and (3) the individual who served as the entity's lead for the collaborative was still working with the organization. The year 2018 was selected as a cut-off date to limit any issues with recall. There were 39 organizations that met these inclusion criteria. Of these, 20 were randomly selected for participation with the goal of a minimum of 10 organizations actively participating in this research. Of the 20 organizations that were sent an email asking for their participation in a phone interview, 11 agreed to participate (Tables 1 and 2), 3 declined due to COVID-19 work demands, and 6 did not respond. No incentive for participation was provided. Table 3 highlights the various initiatives these organizations undertook during their time with AIMM.

Data collection and analysis

Thirty-minute, one-on-one semi-structured phone interviews (Appendix 1) were carried out with participants March 23rd to April 9th 2020 by an evaluator external to AIMM. Calls were recorded, transcribed verbatim, and coded inductively using NVivo 12 (QSR International) by the same external evaluator.

Results

Three main areas, or themes, emerged when participants discussed their experience in the collaborative: perspectives of implementation strategies that were offered, external factors that impacted their participation in the collaborative, and additional benefits that occurred as a result of participating in the collaborative. Each theme along with illustrative quotes are described below.

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Theme 1: Perspectives on the implementation strategies

Coaching

Regular coaching calls and support from their coach was often described as one of the most beneficial parts of being part of the collaborative. Participants discussed the benefits the coaches provided in helping them problem solve, enhancing accountability, and challenging them while also providing encouragement and reassurance. Participants also spoke about how having a coach that was familiar with their practice setting helped when applying implementation theory into practice. One participant talked about the benefits of having outside perspective and someone who could encourage their progress:

> *"[Our coach] was a cheerleader for us. And to get someone's perspective from outside of our organization I think was really helpful, because I think it was really easy for us at times to get down and say, 'This just isn't going anywhere. How are we going to get there?' He would be able to give us feedback and say, 'No, you guys have a good thing going here. You maybe need to try doing this,' or 'What you're looking at now is something that, maybe you're ahead of the game. So don't get frustrated, just hang in there and things will happen.'"*

Participants also discussed the importance of having the coaches adapt their approach to the organization they are working with and being able to provide more direction if needed.

Collaborative learning

Having the ability to learn from others in their medication management implementation, as well as organizations having the opportunity to teach others about their implementation efforts, was discussed as helpful for forming camaraderie and learning what has worked for others.

> *"I felt like being able to be in a discussion with a lot of different organizations at different levels of developing their ambulatory programs was invaluable…. Being able to talk to other people and hear their experiences was really helpful for understanding kind of the things we could try or just how other people also struggle with the same things too."*

Having similar organizations (e.g., all primary care clinics) in the collaborative was seen as most beneficial to facilitate sharing of ideas and strengthening efforts. One participant compared being in AIMM to a meta-analysis because taking people that are doing work in different places and combing efforts means that "*collectively you have a bigger and a better effect and a stronger impact on improving the quality of care."*

IHI materials and activities

As part of the collaborative, participants are requested to complete several activities recommended by the IHI Breakthrough Series, including developing a bold aim, completing plan-do-study-act (PDSA) cycles, creating driver diagrams, and developing a performance story. Participants had mixed feelings about some of these materials. For example, one person did not feel the driver diagrams were particularly useful for their organization, "*For us, we didn't get a lot of use out of things like the driver diagrams, and things like that."* On the other hand, another participant discussed how the driver diagram helped them better outline their plans: *"I think what helped us the best was developing the driver diagram and that helped us really wrap our head around the project because it broke it up into digestible segments"*

Similar sentiments were shared about other resources as well. Some commented that the materials and activities allowed them to think differently about a problem and solutions, and some continued to use the tools after their participation in the collaborative was over. It was also mentioned that the materials helped drive things and were what was needed to achieve goals. However, there were also comments that there were too many steps to complete, feeling like the materials were time intensive to complete, and not always applicable.

Live events

Participants discussed that the live events that were offered through the collaborative were a nice change of pace that allowed them to more easily connect with other organizations. Being able to network with other organizations in this manner allowed them to more freely ask questions and discuss topics outside of the collaborative. *"I think that was just the most valuable piece was just being able to interact with other groups in that live manner."*

One participant did comment that the benefits of attending a live event can be dependent on the audience, and suggested that the coaches also attend the live events to foster collaboration between teams and their coaches. Coming from a different perspective, one non-pharmacist participant mentioned how attending the collaborative live events allowed him to see things from a different perspective by interacting with pharmacy leaders from other organizations.

Webinars

Overall, participants commented that the webinars were less helpful than some of the other resources provided through the collaborative because it was harder to connect with people and they did not feel that all webinar topics were applicable. One participant commented that engagement on a webinar can be challenging, *"It's much more easy for me to be distracted during webinars."* However, some people did comment that they felt the topics that were covered during the webinars were informational.

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"They did add on some extra calls based on specific things that it seemed like a lot of people had questions about. And I thought those were really helpful too, even though sometimes people didn't participate as much as I think they might've hoped, but I still felt like those sessions were really helpful or valuable for people."

Theme 2: External factors impacting participation

While not discussed by everyone, several people brought up organizational factors, such as dedicated time to participate in the collaborative, team engagement, and staff turnover, as influencing their participation in the collaborative. With regards to the time commitment needed to participate in the collaborative, one participant commented on the difficulty of fitting in implementation work in addition to day-to-day clinic tasks, *"Just the time that's needed. Time and resources that are needed to do the extra work like this. You're seeing patients all day, or you're... It's just added work."* However, another participant commented that the level of time investment required by the collaborative is necessary for progression,

"It is definitely a huge time commitment, but if we didn't have that, I don't know if we would be where we're at…If we didn't have that dedicated time, I feel like a lot of the time would get pushed aside, and development of these new services would take even longer. So I think the time is appropriate and definitely needed."

Theme 3: Additional benefits of being in a collaborative

During the interviews, participants mentioned a number of additional benefits associated with being part of the collaborative. For example, many people brought up that the collaborative provided a sense of structure and accountability. As one participant pointed out:

"It would have been easy to delay things as my other duties pressed in on me…so by having to stay focused, knowing that I was going to have the monthly collaborative calls, as well as the monthly call [with my coach], I think that really helped me stay focused on our project."

Another participant echoed this sentiment:

"It held us very accountable, and I think that was really important. So we were able to really stay focused. I think without the coaching calls, that would have been, oh, scramble scramble at the last minute to get this data out."

There were other benefits that were mentioned, such as increasing communication between providers and pharmacists, helping participants see the bigger picture of implementing medication management services within their organization, and paving the way for involvement in other medication management initiatives. One pharmacist commented on the professional development she gained from being part of the collaborative:

"It's been a wonderful professional development opportunity for me as well, I've grown a lot in my understanding of clinical pharmacy…I feel more well-rounded. So not just knowing the clinical or how to be a pharmacist and how to take care of my patients, but also how to have a business model and work on sustainability of that."

Finally, a couple participants pointed out that working in a collaborative prevented them from "reinventing the wheel" by learning from others and having a structured implementation process.

Discussion

This evaluation sought to understand organizations' experience using select implementation strategies offered through a medication management learning collaborative. Certain implementation strategies, such as coaching, were considered beneficial by almost everyone while other strategies, such as the IHI materials and activities, had mixed opinions. Research has suggested that contextual needs may determine what implementation strategies are beneficial.[11] Therefore, the perspectives of AIMM participants may help guide organizations in selecting medication management implementation strategies, but unique organizational barriers and facilitators should also be considered. It is also important to note that it may take more than one implementation strategy to address a single implementation barrier,[11] so a variety of strategies, such as those employed by AIMM, may be necessary. Another learning from this evaluation is the effect external factors, such as dedicated time, can have on implementation efforts. Therefore, to ensure maximal outcomes, organizations should work to support care team members and administrators who are taking on implementation work by providing protected time for implementation activities and championing engagement from other members of the organization.

Utilizing implementation strategies and participating in organized learning collaboratives, such as AIMM, are crucial to advancing medication management services. Hepler and Strand first proposed pharmacy's reprofessionalization around medication management services in 1990 in their landmark article *Opportunities and responsibilities in pharmaceutical care.*[12] Thirty years later, the adoption of medication management services has been variable. While organizations could utilize any number of these strategies independently, as many participants noted, being part of a learning collaborative provided structure and accountability along with implementation support. This is consistent with other research that has demonstrated benefits of learning collaboratives for implementation and quality improvement efforts.[13–16] This is also consistent with diffusion of innovation theory, which

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describes that motivation and time of adoption is influenced by an adopter's position in a social system. Networks of advice-seeking and advice-giving relationships, the presence of opinion leaders and the ability to connect with peers are key factors that accelerate adoption patterns.[17] Therefore, organizations looking to implement or expand medication management efforts may use the results of this evaluation to inform the selection of certain implementation strategies, yet the value of a structured experience that can provide accountability should not be overlooked.

A utilization-focused evaluation centers around producing results that will be acted upon by the primary intended user. Based on the results of this evaluation, AIMM continues to refine its approach to supporting adoption and implementation of medication management services. Since its inception, AIMM has evolved its work to consciously blend elements of diffusion of innovation principles, implementation science strategies and quality improvement approaches. While its work has been heavily influenced by evidence-based practices, the organization constantly seeks to improve in how it applies these strategies in a manner that produces tangible value to participants. From this analysis, it is clear that AIMM's structured approach to coaching is viewed as highly valuable, which is an important finding when one considers that this is one of the most time-intensive and costly support structures AIMM brings to its collaboratives. While monthly webinars are a core strategy in AIMM's collaboratives, this evaluation suggests that there may be ways to improve how this support structure is delivered. This finding highlights the need to clarify purpose both within AIMM and among its participants, as this may be a factor in the mixed perceptions. Webinars are not intended to be simply educational events, but rather are expected to serve as a structured mechanism to pace activities of participants. They are intended to create a point of reflection on progress made during the previous action period (time between webinars) and/or establish an opportunity for planning new implementation activities during the following action period. Consideration of how AIMM communicates this intent and engages participants in this structure is an important action for staff based on these results.

Limitations

The intent of qualitative research is to provide rich, thick description. Because some participants finished their work in the collaborative many months before the interview took place, this may have limited participants' ability to recall the nuances of their experiences. Therefore, if interviews had been completed shortly after completing the collaboratives, responses may have been different. Additionally, although the desired sample of at least 10 participants was achieved, the timing of this evaluation did limit the participation of other organizations that were invited due to COVID-19. Finally, coding was completed by a single evaluator. Although, the evaluator is an experienced qualitative researcher familiar with bracketing preconceptions, some bias could have been introduced.[18] It is important to note that AIMM staff were considered as potential additional coders, but they were not included in the coding process to reduce bias.

Conclusion

Implementation strategies are key to advancing the uptake and spread of medication management services. The results of this evaluation shed light on the experiences of different organizations using select implementation strategies in their medication management implementation efforts and their perspectives may help other organizations in selecting and developing similar implementation strategies. However, being part of an organized learning collaborative provides the additional benefits of structure and accountability. Also, key to the success of implementation strategies are external facilitators, such as having dedicated time and care team engagement to carry out efforts to implement medication management.

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Table 1. Organization type of selected participants

Community Health Center	1
Federally Qualified Healthcare Center (FQHC)	4
Hospital	1
Integrated Health System	5

Table 2. Interviewee role within the organization

Pharmacist	6
Organization leader	2
Pharmacist and organization leader	2
Implementation team member	1

Table 3. Focus of AIMM projects by selected participants

- Improve diabetes outcomes
- Improve hypertension outcomes
- Enhance transitions of care
- Decrease hospital readmissions
- Improve osteoporosis outcomes
- Improve medication adherence and outcomes
- Develop opioid stewardship

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Appendix 1. Interview guide

Questions
Since I am new to AIMM, I was wondering if you could tell me a little bit about how your organization became involved with AIMM?
AIMM shared some of their materials with me, so I was reviewing your bold aim that you set at the beginning of the collaborative and the performance story you put together. Reflecting on that, I was curious how do you feel your experience in AIMM impacted your progress in achieving your bold aim? • Are there any aspects of AIMM that you thought were most helpful for your *organization*? • I was also wondering if there were any aspects of AIMM that you thought were helpful for you as a *practitioner*? • Are there any aspects that you found less helpful? Probes: ○ Live events ○ Coaches ○ IHI model for improvement – run charts, PDSA, driver diagrams ○ Tools ○ Webinars ○ Performance story ○ Bold Aim ○ Community of learning
Thinking back to where your organization was when you first joined AIMM, do you think your program would be any different today if you had not been part of AIMM? • What might be different?
What was it from your experience that you think other organizations might be missing in their transformation work if they don't join something like this?
Is there any strategies that you learned from your time in AIMM that you still use today?
If you could do it over again, are there any changes you would propose to how the AIMM experience is structured? • Are there any other resources you would have liked to have received or strategies you would have liked to have learned while in AIMM?
Is there anything that we didn't talk about related to your experience with AIMM that you wanted to mention?

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